



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,907	06/26/2003	Lei Wu	MP0298	5697
23624	7590	12/13/2004	EXAMINER	
MARVELL SEMICONDUCTOR, INC. INTELLECTUAL PROPERTY DEPARTMENT 700 FIRST AVENUE, MS# 509 SUNNYVALE, CA 94089			LE, DON P	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,907

Applicant(s)

WU ET AL.

Examiner

Don P Le

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-96 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 24-43 and 65-96 is/are allowed.
6) ☒ Claim(s) 1, 12, 13, 15-17, 19, 20, 21, 44, 51, 53, 54, 56-58, 61 and 62 is/are rejected.
7) ☒ Claim(s) 2-11, 14, 18, 22, 23, 45-50, 52, 55, 59, 60, 63 and 64 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 12, 13, 15-17, 19, 20, 21, 44, 51, 53, 54, 56-58, 61 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Jenkins et al. (US 6,738,248).

3. With respect to claim 1, figure 1 of Jenkins teaches a circuit, comprising:
a differential signal transmission line (104, 106);
a common mode circuit in communication with said differential signal transmission line, configured to reduce a swing of said differential signal transmission line; and
at least one overvoltage protection circuit (D1-D4) in communication with said common mode circuit, wherein at least part of said common mode circuit is electrically interposed between said overvoltage protection circuit and said differential signal transmission line.

4. With respect to claim 12, it is inherent that the apparatus of Jenkins teaches the input terminals receiving differential signal.

5. With respect to claims 13 and 51, the apparatus of Jenkins teaches the input signals are complimentary.
6. With respect to claims 15, 16 and 53, the apparatus of Jenkins teaches the voltage swing less than 2 and 1.5 volts.
7. With respect to claims 17 and 54, figure 1 of Jenkins discloses a diode (d1).
7. With respect to claim 19, figure 3 of Jenkins discloses two diodes in series (D1, D6).
9. With respect to claims 20 and 57, the apparatus of Jenkins operates in low impedance mode.
10. With respect to claims 21 and 58, figure 1 of Jenkins discloses a power node (VDD) and a ground node (VSS).
11. With respect to claims 44, 61 and 62, it is inherent in the apparatus of Jenkins teaches input buffer configure to receive input signals.
12. With respect to claim 56, it is inherent in the apparatus of Jenkins that input signal are external to the circuit since it is connected to a pad.

Allowable Subject Matter

13. Claims 24-43 and 65-95 are allowed.
14. Claims 2-11, 14, 18, 22, 23, 45-50, 52, 55, 59, 60, 63 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is an examiner's statement of reasons for allowance:

With respect to claims 2 and 13 and 59, the prior art does not teach first and second resistors.

With respect to claim 18, the prior art does not teach at least one diode having a threshold higher than a voltage swing of the transmission line.

With respect to claims 24 and 86, the prior art does not teach means for reducing a swing of means for transferring.

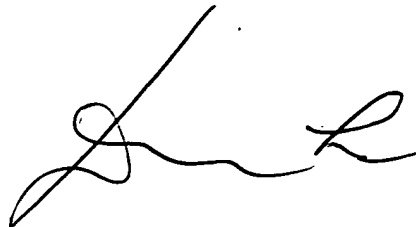
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don P Le whose telephone number is 571-272-1806. The examiner can normally be reached on 7AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/6/2004

A handwritten signature in black ink, appearing to read 'Don Le', with a stylized flourish at the end.

DON LE
PRIMARY EXAMINER